[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0684; Project Identifier MCAI-2021-01204-T]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD-700-2A12 airplanes. This proposed AD was prompted by a report of a lateral offset observed on the head-up display (HUD) of several airplanes between the synthetic vision system (SVS) and actual runway due to mechanical misalignment of the HUD during manufacturing and assembly. This proposed AD would require revising the existing Airplane Flight Manual (AFM) to prohibit steep approach landing (SAL) and enhanced flight vision system (EFVS) operations. This proposed AD would also require calibrating the HUD. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to https://www.regulations.gov. Follow the instructions for submitting comments.

• Fax: 202-493-2251.

• Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

• Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 1-514-855-2999; email ac.yul@aero.bombardier.com; internet https://www.bombardier.com. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2022-0684; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Thomas Niczky, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include

"Docket No. FAA-2022-0684; Project Identifier MCAI-2021-01204-T" at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to https://www.regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as "PROPIN." The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Thomas Niczky, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2021-36, dated November 1, 2021 (TCCA AD CF-2021-36) (also referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain Bombardier, Inc., Model BD-700-2A12 airplanes. You may examine the MCAI in the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2022-0684.

This proposed AD was prompted by a report indicating that during production, a lateral offset was observed on the HUD of several airplanes between the SVS and actual runway. An investigation determined the cause of the offset to be mechanical misalignment of the HUD during manufacturing and assembly. The FAA is proposing this AD to address a lateral offset between SVS and actual runway, which could create an incorrect aircraft reference display on the HUD and lead to excessive deviation during landing, particularly affecting SAL or EFVS operations. See the MCAI for additional background information.

Related Service Information Under 1 CFR Part 51

Bombardier has issued the following documents to prohibit SAL and EFVS operations until the HUD has been calibrated.

• Section 6., Service Bulletins, of Chapter 1 – Introduction, of the Bombardier Global 7500 AFM, Publication No. CSP 700-7000-1, Revision 14, dated October 21, 2021.

• Supplement 7 – Enhanced Flight Vision System (EFVS) Operations, of Chapter 7 – Supplements, of the Bombardier Global 7500 AFM, Publication No. CSP 700-7000-1, Revision 14, dated October 21, 2021.

• Supplement 20 – Steep Approaches with Published Glidepath Angles from 4.5 to 5.5 Degrees, of Chapter 7 – Supplements, of the Bombardier Global 7500 AFM, Publication No. CSP 700-7000-1, Revision 14, dated October 21, 2021.
(For obtaining this material in the Bombardier Global 7500 AFM, Publication No. CSP 700-7000-1, use Document Identification No. GL 7500 AFM.)

Bombardier has issued the following documents, which specify procedures for calibrating the HUD (and second HUD if installed). The procedures include an inspection of the HUD mounting brackets and sill beams for damage and contamination (e.g., drill shavings and adhesive) of the mating surfaces and injection holes, an inspection for voids in the structural adhesive, and applicable corrective actions. Corrective actions include replacing damaged brackets and backfilling voids with structural adhesive. These documents are distinct since they apply to different airplane configurations.

• Bombardier Service Bulletin 700-34-7521, Revision 03, dated July 27, 2021.

• Bombardier Service Bulletin 700-34-7521, Revision 04, dated December 6, 2021, including Appendix 1, dated November 10, 2021.

• Bombardier Service Bulletin 700-34-7523, Revision 01, dated December 8, 2021.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

Earlier revisions of Service Bulletins 700-34-7521 and 700-34-7523 included a typographical error on the metric values on the “External Target Board” table. This error was corrected in Bombardier Service Bulletin 700-34-7521, Revision 03, dated July 27, 2021; Bombardier Service Bulletin 700-34-7521, Revision 04, dated December 6, 2021, including Appendix 1, dated November 10, 2021; and Bombardier Service Bulletin

700-34-7523, Revision 01, dated December 8, 2021. This error is further described in the Retroactive Action section in these Service Bulletins. The FAA has determined that the earlier revisions would be acceptable for compliance with the proposed requirements under certain conditions in their entirety if imperial values were used. However, if the metric values specified in the earlier revisions were used, the HUD calibration is not considered completed for the purposes of Supplement 7 – Enhanced Flight Vision System (EFVS) Operations, and Supplement 20 – Steep Approaches with Published Glidepath Angles from 4.5 to 5.5 Degrees, of Chapter 7 – Supplements, of the Bombardier Global 7500 AFM, Publication No. CSP 700-7000-1, until retroactive actions are also done as specified in paragraphs (i)(1), (2), (3), and (5) of this proposed AD.

FAA's Determination

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would require accomplishing the actions specified in the service information already described.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 40 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
HUD calibration	39 work-hours (for 36 airplanes with 1 HUD) or 108 work-hours (for 4 airplanes with 2 HUDs) X $85 per hour	$7,400 per HUD	$10,715 (1 HUD) or $23,980 (2 HUDs)	$481,660
AFM revision	1 work-hour X $85 per hour	$0	$85	$3,400

The FAA estimates that replacement brackets would cost up to $1,200 (per HUD) if required for any on-condition corrective actions in this proposed AD. The FAA has received no definitive data on which to base the work-hour estimates for this replacement. The FAA has no way of determining the number of aircraft that might need this on-condition action.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. The time for public reporting for this collection of information, including reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information, is provided in the Costs of Compliance section already described. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of

information, including suggestions for reducing this burden, to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Bombardier, Inc.: Docket No. FAA-2022-0684; Project Identifier MCAI-2021-01204-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc., Model BD-700-2A12 airplanes, certificated in any category, serial numbers 70006 through 70084 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 34, Navigation**.**

(e) Unsafe Condition

This AD was prompted by a report of a lateral offset observed on the head-up display (HUD) of several airplanes between the synthetic vision system (SVS) and actual runway. The FAA is issuing this AD to address this offset, which could create an

incorrect aircraft reference display on the HUD, and lead to excessive deviation during landing, particularly affecting steep approach landing (SAL) or enhanced flight vision system (EFVS) operations.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Revision of the Existing Airplane Flight Manual (AFM)

Within 30 days after the effective date of this AD, revise the existing AFM to include the information in the sections of the AFM specified in paragraphs (g)(1) through (3) of this AD.

(1) Section 6., Service Bulletins, of Chapter 1 – Introduction, of the Bombardier Global 7500 AFM, Publication No. CSP 700-7000-1, Revision 14, dated October 21, 2021.

Note 1 to paragraph (g)(1): For obtaining the sections of the Bombardier Global 7500 AFM, Publication No. CSP 700-7000-1, specified in paragraphs (g)(1) through (3) of this AD, use Document Identification No. GL 7500 AFM.

(2) Supplement 7 – Enhanced Flight Vision System (EFVS) Operations, of Chapter 7 – Supplements, of the Bombardier Global 7500 AFM, Publication No. CSP 700-7000-1, Revision 14, dated October 21, 2021.

(3) Supplement 20 – Steep Approaches with Published Glidepath Angles from 4.5 to 5.5 Degrees, of Chapter 7 – Supplements, of the Bombardier Global 7500 AFM, Publication No. CSP 700-7000-1, Revision 14, dated October 21, 2021.

(h) HUD Calibration

Within 27 months after the effective date of this AD, calibrate the HUD and second HUD (if installed), including a general visual inspection of the of the HUD mounting brackets and sill beams for damage and contamination (e.g., drill shavings and adhesive) of the mating surfaces and injection holes, a general visual inspection for voids

in the structural adhesive, and applicable corrective actions, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 700-34-7521, Revision 04, dated December 6, 2021, including Appendix 1, dated November 10, 2021; and Bombardier Service Bulletin 700-34-7523, Revision 01, dated December 8, 2021; as applicable. All corrective actions must be done before further flight.

(i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using the service information identified in, and meeting the applicable conditions specified in, paragraphs (i)(1) through (5) of this AD.

(1) Credit is allowed for Bombardier Service Bulletin 700-34-7521, dated April 1, 2021, if the retroactive actions identified in Bombardier Service Bulletin 700-34-7521, Revision 03, dated July 27, 2021; or Bombardier Service Bulletin 700-34-7521, Revision 04, dated December 6, 2021; are done within 27 months after the effective date of this AD.

(2) Credit is allowed for Bombardier Service Bulletin 700-34-7521, Revision 01, dated April 30, 2021, if the retroactive actions identified in Bombardier Service Bulletin 700-34-7521, Revision 03, dated July 27, 2021; or Bombardier Service Bulletin 700-34-7521, Revision 04, dated December 6, 2021; are done within 27 months after the effective date of this AD.

(3) Credit is allowed for Bombardier Service Bulletin 700-34-7521, Revision 02, dated July 12, 2021, if the retroactive actions identified in Bombardier Service Bulletin 700-34-7521, Revision 03, dated July 27, 2021; or Bombardier Service Bulletin 700-34-7521, Revision 04, dated December 6, 2021; are done within 27 months after the effective date of this AD.

(4) Credit is allowed for Bombardier Service Bulletin 700-34-7521, Revision 3, dated July 27, 2021.

(5) Credit is allowed for Bombardier Service Bulletin 700-34-7523, dated April 1, 2021, if the retroactive actions identified in Bombardier Service Bulletin 700-34-7523, Revision 01, dated December 8, 2021, are done within 27 months after the effective date of this AD.

(j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer:* For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2021-36, dated November 1, 2021, for related information. This MCAI may be

found in the AD docket on the Internet at https://www.regulations.gov by searching for and locating Docket No. FAA-2022-0684.

(2) For more information about this AD, contact Thomas Niczky, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; email 9-avs-nyaco-cos@faa.gov.

(3) For service information identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 1-514-855-2999; email ac.yul@aero.bombardier.com; internet https://www.bombardier.com. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued on June 13, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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